

REMARKS

Claims 1, 3, 5, 8, 10, 11, 14, and 22-28 are present in this application. Claims 1 and 10 are independent claims.

Information Disclosure Statement

The Information Disclosure Statement filed June 14, 2006 has not been acknowledged by the Examiner as to consideration of the reference cited therein. **Therefore, the Examiner is respectfully requested to provide Applicant with an initialed PTO-1449 Form, indicating consideration of the Information Disclosure Statement submitted June 14, 2006.**

§ 102(b) Rejection

Claims 1, 3, 5, and 8 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 6,023,277 (Osaka). Applicants have amended claim 1. Applicants respectfully traverse this rejection based on the claims as amended.

Display devices that display three-dimensional images perform three-dimensional display using a three-dimensional display scheme. A three-dimensional display scheme requires that images be arranged in a specific format for display according to a method of displaying a three-dimensional image by a display device. Fig. 41 of the present application shows an example of an image format for a “time-division scheme.” Figs. 42A and 42B of the present application show an example of a display method and image format for a “parallax barrier scheme.” Figs. 43A to 43C show an example of an image format for a “lenticular scheme.” Recorded data lacks compatibility among these different display schemes. For example, data recorded to be displayed by a time-division scheme cannot be displayed on a three-dimensional display adapted for the parallax barrier scheme. In particular, data is recorded on the assumption that it will be displayed on a specific type of display device according to the type of display method for that display device.

Subsequently, data is presumed to be recorded by a particular display device that performs display based on a type of display scheme, and information identifying the type of display scheme is not recorded. For example, if the presumed display scheme is parallax barrier scheme, information identifying that the display scheme is the parallax barrier scheme is not recorded along with the data. Furthermore, information that would be useful for other display schemes is not recorded. For example, even if there might be sufficient data for display using an alternative display scheme, such as the lenticular scheme, data needed by the alternative display scheme is not recorded. Still further, because data is recorded for a presumed display scheme and display device, no information is recorded that identifies the format that the data is recorded in. (see section "Background Art").

FIG.4A

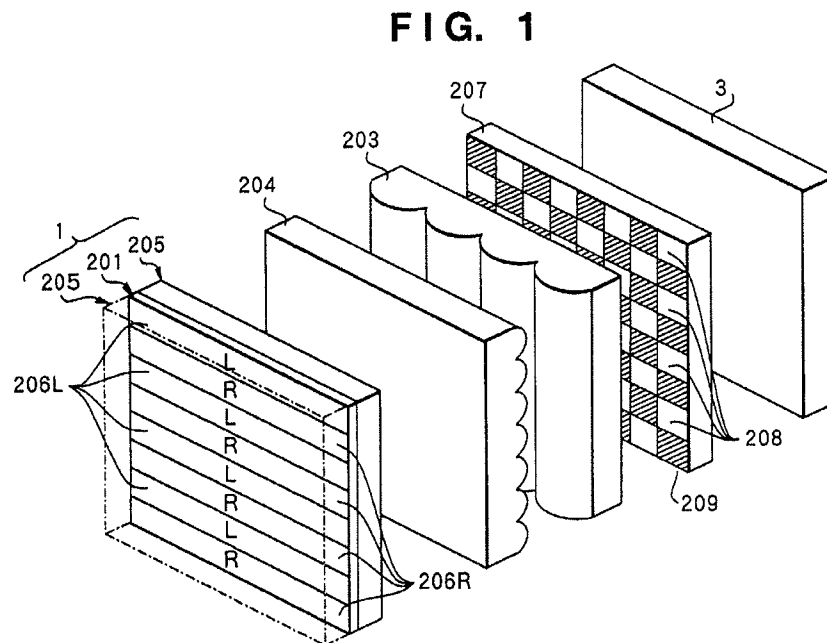
OBJECT ID	: ID INDICATING THREE-DIMENSIONAL DISPLAY CONTROL INFORMATION
OBJECT SIZE	: SIZE OF THIS INFORMATION OBJECT
NUMBER OF VIEWPOINTS	: 2
VIEWPOINT POSITION L	: STREAM NUMBER 2
VIEWPOINT POSITION R	: STREAM NUMBER 3
DIRECTION OF THINNING	: HORIZONTAL DIRECTION
CAMERA ARRANGEMENT	: PARALLEL
PARALLAX AMOUNT SHIFT LIMIT	: ± 16 PIXELS
BORDER DISPLAY	: YES
BORDER IMAGE DATA	: PATTERN 2
PARALLAX IMAGE SWITCHING PITCH	: 1 SUB PIXEL
SAMPLING PATTERN	: RESOLUTION PRIORITY
IMAGE ARRANGEMENT	: LEFT AND RIGHT, SIDE BY SIDE (IMAGE FOR LEFT EYE ON LEFT SIDE)
REVERSAL	: IMAGE ON RIGHT SIDE TO BE REVERSED
	:

As can be seen in Fig. 2, the present invention includes an image data recording apparatus that generates a multimedia information file that includes header control information (see, for example Fig. 4A). (specification at page 12, lines 10-13). As can be seen in Fig. 4A, three-dimensional control information includes specific information that is necessary for several different three-dimensional display schemes. For example "parallax image switching pitch" is information needed in the parallax barrier scheme, while "image arrangement" is information needed in the lenticular scheme. Thus, since different display devices display three-dimensional images using a respective three-dimensional display scheme, the present image data recording apparatus

generates header information that enables different display devices to display the image data contained in the multimedia information file.

Applicants have amended claim 1 to indicate that the three-dimensional image display control information is for a plurality of three-dimensional display schemes.

Osaka discloses an example of a three-dimensional display based on a three-dimensional display scheme, referred to as “crossed-lenticular scheme.” (col. 8, ll.31-44; see Fig. 1).



Unlike Osaka, the claimed multimedia information generation apparatus includes a control information generation unit that generates three-dimensional image display control information necessary for converting said three-dimensional image data for enabling stereoscopic vision for a plurality of three-dimensional display schemes.

Furthermore, unlike Osaka, the claimed control information generation unit generates identification data for identifying at least two three-dimensional image data and including

identification data in the three-dimensional image display control information, and “only one said identification data being provided for said at least two three-dimensional image data.”

According to the present specification at pages 33-34,

“..., when all of the image data stored in one module are three-dimensional image data, only one piece of three-dimensional image display control information having an identifier of 0 for example may be stored, instead of all three-dimensional image display control information corresponding respectively to the three-dimensional image data. Specifically, it is defined that the identifier number of the multimedia data is an integer of 1 or more and the identifier number of 0 represents that all the images in the module are three-dimensional images. In this case, it is unnecessary to store a plurality of pieces of three-dimensional image display control information, reducing the total amount of codes.”

In other words, in the claimed invention, only one identifier is provided for at least two three-dimensional image data. Applicants submit that Osaka does not teach or suggest generation of multimedia information constituted of at least two three-dimensional image data, and generating only one identification data for identifying the at least two three-dimensional image data.

For at least these reasons, Applicants submit that Osaka fails to teach at least one claimed element. Accordingly, the rejection fails to establish *prima facie* anticipation and must be withdrawn.

§ 103(a) Rejection – Osaka, Akamatsu

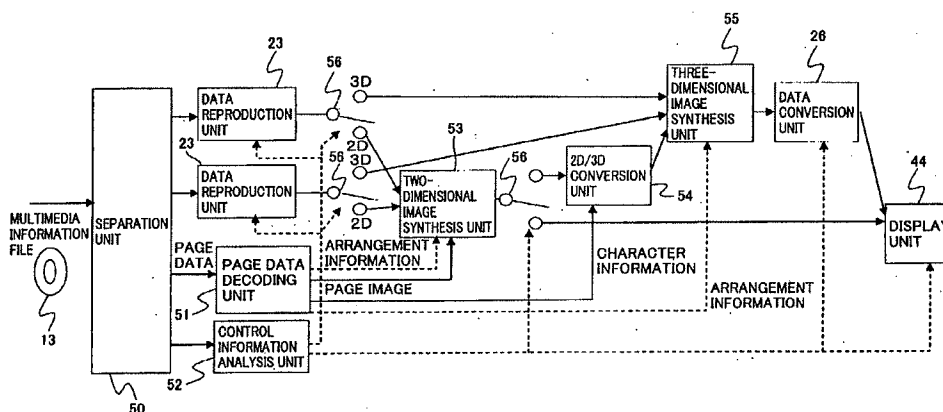
Claims 10 and 11 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Osaka in view of U.S. Patent 6,313,866 (Akamatsu). Applicants have amended claim 10. Applicants respectfully traverse this rejection based on the claims as amended.

It is noted that although the statement of rejection lists Osaka and Akamatsu, the body of the rejection refers to a “stereoscopic-image-data processing unit 306” and “display control unit

303” which are disclosed in the Iizuka reference. Thus, the rejection is improper for failing to establish *prima facie* obviousness.

Independent claim 10 relates to a “multimedia information reproduction apparatus” (i.e., as shown in Fig. 27).

FIG.27



In the embodiment shown in Fig. 27 of the present application, the three-dimensional image synthesis unit 55 performs synthesis of the three-dimensional image based on input arrangement information (specification at page 36, lines 26-27). For example, when arrangement information of the three dimensional image data is designated as (X,Y), the three-dimensional image synthesis unit may synthesize the image so that each of the right and left images are arranged at (X/2,Y) as shown in Fig. 29B (i.e., coordinate conversion).

Furthermore, a data conversion unit 26 converts three-dimensional image data of the three-dimensional image synthesis unit to conform to a desired three-dimensional display form.

Subsequently, the invention of claim 10 provides facilities for providing and/or converting multimedia information into a form appropriate for a display device based on various three-dimensional display schemes. Claim 10 has been amended to include a data conversion unit (e.g., 26) for converting the three-dimensional image data into a form for a selected display

scheme of a plurality of three-dimensional display schemes supported by the three-dimensional image data.

Applicants submit that both Akamatsu and Osaka are directed to display devices that display according to a single three-dimensional display scheme. Osaka does not teach a module storing three-dimensional image data in one multimedia information file that has display control information for various three-dimensional display schemes. Unlike Osaka, the claimed invention includes multimedia information constituted of three-dimensional image display control information supporting a plurality of three-dimensional display schemes.

Applicants submit that Akamatsu and Osaka, either alone or in combination, fail to disclose at least the claimed “data conversion unit converting said synthesized three-dimensional image data based on a three-dimensional display scheme selected from among said plurality of types of three-dimensional display schemes supported by the three-dimensional image display control information.”

For at least these reasons, Applicants submit that Akamatsu and Osaka fail to teach at least one claimed element. Accordingly, the rejection fails to establish *prima facie* obviousness and must be withdrawn.

§ 103(a) Rejection – Osaka, Iizuka

Claims 14 and 22-28 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Osaka in view of U.S. Patent 6,657,655 (Iizuka).

Claim 14, depends from claim 1 and relates to a “multimedia information reproduction apparatus.”

Applicants submit that at least for the reasons above for claim 1, claim 14 is patentable as well.

Applicants request that the rejection be reconsidered and withdrawn.

CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Robert W. Downs Reg. No. 48,222 at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By Robert Downs #48222
Charles Gorenstein
Registration No.: 29,271
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant